

**SHURE****MICROPHONES AND ELECTRONIC COMPONENTS**

AREA CODE 312/328-3000 • CABLE SHUREMICRO

**MODEL N55E****DATA SHEET  
STEREO DYNATIC  
PHONOGRAPH STYLUS****SPECIFICATIONS  
M55E CARTRIDGE AND N55E STYLUS**

<b>FREQUENCY RESPONSE:</b>	From 20 to 20,000 cps
<b>OUTPUT VOLTAGE:</b>	6.8 millivolts per channel at 1,000 cps at 5 cm/sec.
<b>CHANNEL SEPARATION:</b>	Nominally over 25 db at 1,000 cps 20 db at 10,000 cps. 15 db at 20,000 cps
<b>CHANNEL BALANCE:</b>	Within 2 db of each other
<b>RECOMMENDED LOAD IMPEDANCE:</b>	47,000 ohm (per channel)
<b>INDUCTANCE:</b>	720 millihenries
<b>D.C. RESISTANCE:</b>	630 ohms
<b>STYLUS MODEL N55E:</b>	Replacement: Grip Color—yellow <b>ELLIPTICAL SHAPED DIAMOND TIP</b> .0007 inch (17.8 microns) frontal radius .0010 inch (25.4 microns) between points of contact with groove. .0002 inch (5 microns) side contact radii
<b>COMPLIANCE:</b>	Vertical { Horizontal { 25.0 x 10 <sup>-8</sup> cm/dyne at 26.7° C.
<b>RETRACTILE STYLUS:</b>	When excessive forces are applied to the stylus, it momentarily retracts; and a soft plastic bumper comes in contact with the record.
<b>TRACKING FORCE:</b>	$\frac{1}{2}$ gram $\square$ 1½ grams (The lowest tracking force can only be realized if used in fine arms with virtually no vertical or horizontal friction, such as the Shure-SME Arm.)
<b>TERMINALS:</b>	4 terminals, with loop pin for 3 terminal connections
<b>MOUNTING:</b>	Standard $\frac{1}{4}$ " (12.7 mm) mounting center (Hardware is supplied with each cartridge for mounting purposes.)
<b>WEIGHT:</b>	7 grams

**GENERAL:** The cartridge has been developed for use with all high fidelity amplifiers having magnetic and constant velocity inputs.

**SHURE-SME-M55E MOUNTING INSTRUCTIONS:** To mount the M55E in the Shure-SME Arm, Model 3009 and 3012, refer to the paragraphs on Cartridge Installation and Balancing in the instruction Manual supplied with the pickup arms.

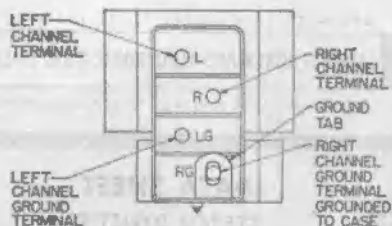
**GARRARD LAB 80 AND A70 MOUNTING INSTRUCTIONS:** The Garrard Lab 80 and A70 Pickup Head shells have special British threads. In order to mount the Shure M55E Cartridge, use the two special brass screws and tubular aluminum spacers supplied with the cartridge. Put one tubular spacer between each screw head and the cartridge body.

**OPERATION:** Recommended needle forces for optimum results are listed under "Specifications." Forces greater than the indicated "maximum" should not be used.

**M55E CONNECTIONS**

**4-LEAD STEREO CONNECTION:** Connect "hot" lead of right channel to terminal "R" and shield or ground lead of right channel to terminal "RG." Connect "hot" lead of left channel to terminal "L" and shield or ground lead of left channel to "LG." To prevent "ground loops" and hum, no common connection should be used at cartridge terminals.

**MONOPHONIC CONNECTION:** For single channel reproduction of Monophonic or Stereo recordings, connect "hot" lead to both "R" and "L" terminals and connect ground or shield lead to both ground terminals marked "RG" and "LG."



TERMINAL DIAGRAM

FIGURE 1



STYLUS REPLACEMENT

FIGURE 2

**CAUTION:** Do not make solder connections to cartridge terminals. Make all solder connections to terminal jacks provided before slipping them over the terminals.

### EASY STYLUS REPLACEMENT

Grasp molded housing of stylus between thumb and forefinger. Gently withdraw stylus by pulling forward out of cartridge. Grasp replacement stylus between thumb and forefinger and insert into stylus socket. Press stylus into socket until the molded housing of the stylus mates with the cartridge case. Care must be taken not to allow the finger to slip off the molded housing of the stylus, resulting in damage to the stylus tip or shank.

**SPECIAL NOTE:** The Dynetic stylus assembly used in these cartridges is the most critical component. To maintain the original performance standards of your cartridge, be certain that any replacement stylus you buy bears the following certification on the package: "This Dynetic stylus is precision manufactured by Shure Brothers, Inc."

Avoid inferior imitations. They will seriously degrade the performance of your cartridge. All genuine "Dynetic" stylus are manufactured by Shure Brothers, Inc.

**LABORATORY TEST FINDINGS:** (Note: The following stylus test findings of the Shure N3D stylus are an example of the close scrutiny Shure pays to all Imitation Shure Dynetic Stylus.) Shure laboratory tests show that the imitation stylus assemblies labeled as replacements for the Shure Model N3D Stylus Assembly vary drastically in important performance characteristics. For example, the compliance varied from a low of 0.9 to a high of 11.5, requiring 9.0 grams to track a record with a low compliance stylus, and 2 grams with a high compliance stylus. The high compliance stylus retracted at 4 grams needle force, allowing the cartridge case to drag on the record surface, thereby becoming inoperative. Response at high frequency (relative to the 1kc level) ranged from a 5.5db peak to a drop of 7.5db. Separation varied from "good" (27db) to "poor" (15.5db) at 1kc. These figures reveal that there is very little consistency in performance characteristics of the imitation Dynetic Stylus.

In each of the categories shown above, the results ranged from good to poor. As a matter of fact, only 10% of the samples met the Shure performance standards for the Shure N3D Stereo Dynetic Stylus. In addition to our test findings, our Service Department records show that an increasing number of Dynetic Phonograph Cartridges are being returned because of poor performance—our examination has disclosed that most of these returned cartridges are using imitation Dynetic Stylus.

**CONCLUSION:** Obviously, if any imitation Dynetic Stylus is used, we cannot guarantee that the performance of Shure Dynetic cartridges will meet the published Shure specifications. Accept no substitute.

### Guarantee

The Stereo Dynetic Cartridges and Stereo Dynetic Stylus are guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from the factory, provided all instructions are complied with fully. The Guarantee does not cover stylus wear, nor does it cover damage to the stylus assembly from abuse or mishandling.

### Service Protection — Accidental Damage

Shure Dynetic Stylus will withstand long, continued usage. However, if stylus assembly should be damaged due to accidental mishandling, and diamond tip is still intact, return the stylus assembly to the factory for servicing and testing to original performance standards at a nominal service charge of \$6.00. This price is only applicable when the customer returns the stylus direct to the factory in Evanston. In Canada, send to Canadian address shown below. (Prices proportionately higher in Canada.) Please enclose a check for the service charge with the returned assembly.

Return Stylus to:  
Service Department  
Shure Brothers, Inc.  
222 Hartrey Avenue  
Evanston, Illinois 60204  
U.S.A.

In Canada return stylus to:  
A. C. Simmonds and Sons, Ltd.  
285 Yorkland Boulevard  
Aglincourt, Ontario  
Canada

**PATENT NOTICE:** Manufactured under U. S. Patents 3,055,988, 3,077,521, and 3,077,522. Other patents pending.

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